Invertebrate Poleon ology Yale Peabody Museum

Tune Ross

Central States Field Trip

1998

May 29- June 16

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Locations from Holland & Patzowsky p. 258 B. Briley Section (Ferndale and Sequatchie Fm), Briley Parkway.

- p. 258 Vietnam Veterans Highway, about 200 ft. of section. From top of middle Ordovician into "Hendersville Sh", Leipeas Fm, Arnheim Fm, and Ferndale/Sequatchie Fm.
- p 258 Springfield Highway. SH. V. high Ferndale/Sequatchie Fm.
- p. PW Peyton's Warehouse. Arnheim Fm. Bottom x-bedded ss. succeeded by packstone at Goodletsville. Located.
- C, V, W, P M are all in same area along US 231.

Log 9: Ashland City Pike St. Highway no. 12 see pg. 89 Wilson (19) for section beneath Cumberland R. bridge. Checked this out. & pg. 90 at Jordania

97.5

Bassler, R.S. 1932 The stratigraphy of the central basin of Tennessee: Nashville, Tennessee. Division of Geology, Bull. 38, 268 p.

5/29/95-Stop 1 ramp beneath Conference Rd. on Vietnam Veterans Parkway, Northern Nashville. See Holland and Patz. p. 258. 3 photos.

From H & P (1997). J. Sedt. Res. v. 67, p. 263 Vietnam Vets Highway. Series of roadcut on both sides of exit ramp from TN 386 (V.V. Parkway) onto U.S. 31 E. Goodletsville, TN. Quad. 36 degrees 18' N, 86 degrees 39' W. Additional roadcuts just west and east of exit ramp along TN 386. Lowest part of the section exposed at roadcut on

Chuck has measured about 105 ft. (~32 m) but Holland and Patzhowsky

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(1997) have 152 m at Vietnam Veterans Highway intersection.

5/29/98-Stop 1-B

west bound on ramp from south bound Conference Rd. There's a covered inerval between top of Stop 1 and base of Stop 1-B Coll. 5/29/98 A @ Stop 1-B (I have trouble fitting H&P's thicknesses into what I measured!)

5/29/98-Stop 2

Kasper Way- quarry at end of road, behind warehouse. "Peyton Warehouse" is out of business. Kasper Way is short service road between warehouses on the east and U.S. 41 & TN 11 on the west. It lies just east of I-65, 1.7 miles north on U.S. 41 from Goddletsville city

5/29/98-Stop 3

Springfiled Highway, .5 miles north of Davison Co. line. This is about 1-1.5 miles north of Kasper Way on U.S. 41, north of Goodlettsville, TN.

Saturday 5/30/98

Went north on U.S. 24 to U.S. 440 W. Took U.S. 440 W to Dr. D. B. Todd Bl then joined Clarksville Pike (U.S. 41 A & TN 12) onto Cumberland R. bridge. North side of bridge Chuck took a track at telephone swithbox down to outcrops of dolomitic limestone below M.L.K. bridge -?- (upstream side). Massively bedsded, fine to medium grained dolostones with some vertical tubes showing on at least one bedding surface about 10' below highest exposure.

5/30/98

West of Cumberland Bridge off Clarksville Pike, down two streets toward river 200 yards downstream from bridge. Location- substation in a residential area; see Wilson p.90

Wilson p. 90

1. Jordonia/Eaton's Creek Rd. Atc on hill on private property. Did not pursue. Weathered.

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2. North bound entry ramp of TN 155- Briley Parkway at TN 12 (Ashland City Pike) ~2.5 miles west of MLK bridge (TN 12) over Cumberland River.

Clarksville Pike at Briley Parkway (TN 155). Section measured on SW corner of Cloverleaf; east bound off ramp-H&P's locality. (this is junction with U.S. 41 Alternate)

5 pictures here

We think this was H&P's (1997) p.258 Briley Parkway section. However, a lot more section is exposed then is shown by H&P.

Wilson (19) locality

School for Blind- railroad cuts to NE pretty much covered for +/- .5 miles then a cut with dolostone, cross bedded (Bigby Ls), n. irregular x-bedding-could be soft sediment deformation or a shaly limit below. (photo).

Ls., dolomite, 3"-4" nodular beds, v. silty & siltstone. Hermitage Fm. (photo)

Wilson in Nashville Geology volume says the new covered interval behind school for blind quarry is Hermitage Fm- Wilson, p. 21-23 suggest the Bigby is a reventanant deposit.

5/31/98

TN 255 Donelson Pike northbound at Nashville International Airport. Nashville Airport (H&P location)

Stop1 *East side relatively fresh cut relative to west side Northbound off ramp to Nashville Int. Airport, measured exposures on east side. *It may be that E. side of road had been widened and presented a more unweathered section in comparison to west side which was not as complete at top of section.

5/31/98 -Stop 2

Baker(s) Station section p.97 Wilson location

Baker Station railroad cuts

NW of Goodletsville - the Baker Station Road crosses the Clasrksville Pike (U.S. 41) about 2.25 miles NW of Goodletsville. Turn west for about 3/4 mile to railroad crossing. Park at tracks on north side. To south, three

railroad cuts expose Osage down to Cincinnation; earlier (1960s) we also had walked farther SSE to a 4th railroad cut.

6/1/98-Stop 1

Area to South Nashville. ~1.2 miles west on US 412 from intersection with US 31 at Columbia, TN. See H&P p. 255. (Just E of Duck Road & TN 7 (overpass)). US 412 is a bypass route around northern Columbia. 5 photos here.

6/1/98

Further west; Little Bigby Creek. Hermitage/ Carters

Stop 2

Roadcut further west on US 412 4-5 miles west of Stop 1. 1.2 miles northeast of overpass on TN 50. 2 photos. This is a Columbia N section of H&P, 1997, p. 255.

1.2 miles west of junction of US 412 and TN 50 on US 412. did not find H&P's HST units.

Monday (6/1/98) look at Exit 32 & Lewisburg loc. of H&P '97.

6/1/98

Columbia W (CW) of H&P, 1997. Roadcut on both sides of US 412/US 43, 0.3 miles W of overpass over TN 50. 5 photos (N. side of cut for measurement) Coll. 6/1/98-A; Coll. 6/1/98-B.

H&P '97 place a SB <u>in</u> the micritic (mudstone) bed. =M6/M5. I suggest that the micrite is a max flooding unit and the SB is either at the base of the micrete or(and) about 34' below the conglomeratic Is.

6/1/98

US 65 Exit 32 at TN 373, H&P 1997. (middle lebanon ls.) Coll 6/1/98-C; Coll 6/1/98-D. 1 photo here.

6/1/98

on TN 417 ~2 miles NW of Lewisburg, TN, 0.1 mile SW of junction with US 431 & TN 50. (Baptist Church).

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6/2/98

Tenn. 840 - at Central Valley Road, just S of overpass road- about 1.5 miles SW of next stop which is H&P "CV" outcrop. This part is repeated in H&P's '97 'Central Valley' section. Just S of N. exit to Sulphur Springs Rd., Leanna, TN. Coll. 6/2/98-A

6/2/98 -Stop 2

H&P's "CV" outcrop. On TN 840 about 0.9 miles SW of interchange with TN 266. 4 photos here.

6/2/98 -Stop 3 Lascassas, H&P locality Roadcut on TN 96 northside, just west of junction with TN 266. (This is NE of Murfreesboro on TN 96 about 8 miles, opposite gas station). 2 photos here.

(6/3/98-6/5/98 car repair)

6/6/98 ~1/2 mile east of Double Springs, road junction with US 705.

6/6/98 US 705 at Cripple Creek. Section illustrated is from creek up to road cut. 2 photos. 2 in creek cut include unconformity. Coll. 6/6/98-A

6/6/98 Cannon Fork locality just east of Cannon County line. Road cut on both sides of road. 3 photos. (3 overlapping photos).

6/6/98 Hollis Creek locality of H&P 1997, p.257. M4 and M5 part of section on Rutherford County line. 2 photos.

6/6/98 Old Woodbury Pike/Gripple Creek Road. West end of Readyville Road and junction with US 70 S. Photo above otcs on p. 29. (lunch stop)

6/6/98 US 70 S. Mile post 4, about 4 miles west of Woodbury. Photo-Hermitage Fm. E. fork of Stones River.

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6/6/98 US 70 S. 4.5 miles west of Woodbury. 4 photos total. (Hermitage has a lot more shale than at Motel 6 cut.)

6/6/98 Snow Hill on US 70 near Dowelltown.

Dry Creek Rd to Old Snow Hill Rd. off US 70 about 1/2 mile east of Dowelltown. Old Snow Hill Rd. os part of the old abandoned highway. It curves around hillslope; is overgrown. It enters the "new" US 70 at 2 places; 1 at the bottom of hill and the other at top of hill.

See p. 31. We have 1 photo- need to locate field location. CR thinks it was before Snow Hill. (print has been labeled as "pre-27")

6/6/98 27-A H&P 1997, Bluff Creek locality on TN 53, 2 miles north of I-40. 5 or 6 photos. (New road cuts -v. impressive high cuts)

6/6/98 27-B Tanglewood. ps/gs and ws 6"-2' beds; ripple bedding.

6/7/98 "motel" photo-Hermitage Fm., TN

6/7/98 <u>28-A</u> Gladdice, TN; H&P 1997, p. 257 & 258. 3 photos. notes- see H&P's section.

6/7/98 <u>28-B</u> Photo higher on hill-next outcrop to west. Gladdice, Jackson County (near west side of county) almost at county line.

6/7/98 <u>29</u> Big Bottom, TN of H&P 1997. 1 photo near center of shallow syneline. On TN 53 northeast of Gainesboro.

6/7/98 30 0.5 miles east of Celina on TN 53. 1photo of first roadcuts, 1 photo of second roadcuts.

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West of Pea Ridge.

6/8/98 31 Logan Lick Road. Left Georgetown motel (at exit 629) and to interstate 75 S to exit 96 to Winchester; from Winchester we went 4 miles on KY 89 and met a y in the road. Took Old Ruckerville Road to next y where we took Logan Lick Road; wound down and around and paralell to railroad track encountered a ~10 ft section covered by vegetation. Coarse grained crinoidal packstone/grainstone; beds are channellled 4'-5' across and 8" dep; some general x-bedding on this kind of scale. Higher bedscalcarenitic, sandy, laminated; some beds with some bracks. at RR track beyond underpass. Coll. 6/8/98-A Clays Ferry Fm. - see diagram on p. B5 of Weir & Greene, USGS Bull 122 4-B. 2/3 up in section. (had car checked for leaking? differential oil).

6/9/98 Delaplain Loc. 177,178. pp768. (B-B') lower part of Millersburg Mbr. SE side of road cut between Toyota plant gates KY 620. Coll. 6/9/98-A, Coll. 6/9/98-B, Coll. 6/9/98-C.

Did not stop-4:30 pm shift change at Toyota plant. Roadcut NW of Toyota Gate 7, west side of road- mostly late, wavy-bedded calcaremte P/G; r, little silty shale.

6/9/98 KY 620, Road cut S & W of Gate 7 of Toyota plant by 3/4 mile. 2 photos.

Rsl 2906- more shale in sequence * the outcrops on KY620 were adjacent to large Toyota plant and it was all marked "no parking"

6/10/98

Returned on KY 460 to Stop 1. East on KY 620 from motel to Oxford - no outcrops. N. side of US 460 anout 100 yards east of junction with I-75, east of Georgetown. 1 photo.

Is this (NO?!) the Stamping Ground Mbr of Lexington hs. Large stromatoporoid heads in 2 or 3 beds- 2-3 ft in length. BRy. Coll. 6/10/98-A At base of lower stroma bed. See Creasman, E.R. 1973 p.38-39 (See his sect., 151 Georgetown A, plate 2)

6/10/98 KY 460 in Georgetown at Georgetown water tower at top of hill. 1 photo. W. edge of Georgetown. Stop 1.

Stop 2 US 460 just beyond KY227 intersection. 1 photo. Higher in section in relation to stop 1.

6/10/98 Old quarry on N side of McConnell Run. Creek at bridge on County Road 1689, ~1.2 miles W of Stamp. Ground. 2 photos. Old quarry floor filled in/covered. Cressman, 1973, p.38 -type section of Stamping Ground Mbr.

6/10/98 Stop along KY 1262 ~1/2 mile SE of junction with KY 1900. 1 photo.

6/10/98 Coll. 6/10/98-B South along KY 1900 from junction with KY 1262. (sign reads Canoe, KY 3.0 miles). 2 photos on KY 1900, continued. (end of film).

6/11/98 East of Frankfort, KY near forks of Elkhorn. On S. side US 460, roadcut and junction with "Old Georgetown Road". 1 photo.

6/11/98 Frankfort, KY (western side) just north of junction US 127 and KY 1005. 2 photos

6/11/98 West side of Kentucky River, south of Frankfort on US 421 (Bald Knob Rd.), just north of fancy intersection with US 60 and US 127. 2 photos of up part, x-bedded and channel cut beds. 3 photos- up south side of road (no outlets)

6/12/98 Took I-75 and then I-64 East to Mt Sterling. Some exposures around 2 Mt Sterling exits. Photo. Exit ramp from I-64 at Mt Sterling, Exit 110 east bound from I-64.

1photo-NE side of exit 110 (west bound off ramp). Mt Sterling, KY.

6/12/98 South bound exit immediately S of bridge over Kentucky River on I-75 S. 2 photos of flow structures.

6/12/98 Road down to Claus Ferry Campground. 1 photo looking down on type Clays Ferry, garrard siltstone at top. 1 photo from lookout point. Took "old road" down to river - about 20' below I-75 bridge there is a 2-2.5' bed of contorted sandy siltstone. (1 photo in shade).

6/12/98 Forksville, +/- 3/4 mile east on KY 37, = Forkland. photo.

6/12/98 KY 1108, just S of Crawford Hollow. photo.

6/13/98 on TN 337, just NE of Bradfordsville and junction with TN 49 at the "Narrows". 1 photo.

6/13/98 KY 55, ~1 mile N of Airport Road turn off. Lebanon/Springfield Airport. 2 photos.

6/13/98 Turn off Springfield- KY 528. Photo of section above previous cuts.

6/13/98 Frederickton road cut, 3/4 mile west of bridge on US 150. 5 photos.

6/14/98 Took US 62 at Toyota plant to Cynthiana. US 27 0.2 miles north of bridge over railroad lines at Cynthiana. 2 photos of road section.

6/14/98 Scouted on US 36 northwest of Cynthiana for section in Prof. Paper 768, plate 3. Took KY 1743 off US 36 and circled round back to US 36- occasional otc. partly overgrown, but nothing else. Took US 27 north to Falnouth. -?- At one time there may have been a sequence of cuts which showed the section, but there are none now.



6/14/98 Maysville, KY - Junction KY 9 and KY 11, road cuts on KY 11 north of junction. W side of KY 11. 5 photos.

6/14/98 On KY 9, just W of intersection with KY 11. 1 photo higher in sequence than around corner. Maysville, KY.

6/14/98 Photo at 5/26/95 Stop 47, Bluegrass Center US 68, 3/4 mile N of KY 9 intersection. East side of highway. Shopping center- quarried wall behind buildings.

6/15/98 Paris, KY. US 68 "bypass", N. side of Paris, at railroad overpass and YMCA soccer complex. Bridge over river to south a few hundred yards. 2 photos.

6/15/98 Two road cuts on US 68 (south end of newly improved section of highway about 20 miles S of Maysville.) Just 1 mile S of Licking River bridge. photo (new roll, no print of this negative).

6/15/98 Section adjacent to Blue Licks Battle Field State Park, KY. US 68. photo.

6/15/98 We continued north on US 68 looking at cuts-some grassed overto Maysville. At top of hill to Kroger and Wal-Mart.

From Maysville to I-275 near Covington on KY9. A good highway with numerous extensive, long sections. Lot of shale in sections.

I-275 to motel on Nine Mile Rd.

(Lunch at Blue Licks Battlefield State Park- Daniel Boone et al memorial to commemorate the 102(?) men that lost their lives and the Americans were defeated by the English and Indians.)

6/16/98 See field notes 5/23/95 Photo 1. Lower stop. Stop 1 of H, P &F 1981. Photo 2 Filager Rd. Stop 28. Ohio 32 East. (Started day by leaving film at Meyer's for printing- 2 rolls.) Picked up to relocate field stops in 1995 field book. The ramp exposure has small trees growing on it but the



strat. section is still discernible. Filagen Rd. section is rapidly being overgrown as is the "Batavia Rd" section where there is presently extensive road repaving taking place. (MacDonald's; State Police, and other various quick food restaurants (Arby's, Burger King) at exit ramp at top of hill.

6/16/98 US 32 Stop 39 in 1995 field trip notes. long road cut in east side of valley. Ord. and Siln. 5 photos.

Stone Rd. (N/S) at top of hill.

Stop 40 in 1995 field notes. OH 41 at southern end of bridge and at Oliver township line.

Stop 41 (1995 field trip) 2 photos. (lunch stop).

Just North of Stop 42 (1995 field trip). 1 photo west side of road.

300 yds. north of previous photo. 1 photo.

Stop 42, west side of road, 1 photo.

Stop 43, road cut west side of Whitoak Creek. 4 photos.

continued in Book 2.

Wilson, C.W., 1949, Pre-Chattanooga stratigraphy in Central Tennessee;
Tennessee Division of Geology Bull. 56, 406 pp.
do , 1962, Stratigraphy and Geologic History of Middle Ord. rocks of Central Tennessee, Geol. Soc. Amer. Bull. v. 73, 481-504

Wilson, Charles W. J., 1990. Pre-Chattanooga stratigraphy in Central Tennessee 2nd Ed. State of Tennessee, Dept. of Conservation, Division of Geology Bull. 56. 415 p.

Expenditures:

End Book 1



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Tune Ross

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DOCUMENT NO 839
Invertebrate Paleontology
Yale Peabody Museum

1998

Central States Field Trip

June 17-June 29

Book 2

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- 1. Nashville -Airport, Motel 6. 420 Metroplex Dr. Harding Place/Metroplex May 26-June 7 I-24 at exit 56.
- 2. Georgetown Motel 6, Exit 129 I-75, Delaplain Rd. June 7- June 15 401 Cherryblossom Way Georgetown, KY
- 3. Cinncinnati (southeast) OH. Motel 6 #1092 I-275 at Exit 65/Beechmont/ Rt. 125 3690 Nine Mile Rd. June 15-June 19
- 4. Marion, Illinois

Exit 44 I-71, KY going to Carrolltown. excellent stop.

6/17/98 See 1995 field notes for Reidlin (Red 48, 1995) & Bedford (Red 50, 1995) Reidlin- 8 photos Bedford- 9 photos

6/18/98 Indiana

Red <u>28</u> in 1995 field book. Bonwell Hill, 1 mile NE Brookville and 1/4 mile east of road into dam and spillway- 3 photos. Indiana Hwy 101. Brookhill Lake ramp road is at the top of this cut.

Red 29 in 1995 field book. Garr Hill - S. side of valley. 1 photograph of eastern side of road cut.

6/18/98 N. of Garr Hill. Loc. <u>29</u> in 1995 field notes. On Indiana Hwy 101. 4 photos. Coll. 6/18/98-A, Coll. 6/18/98-B.

6/19/98 Drove from Beechmont (Cinncinnati) Ohio, via I-64 across Indiana into Illinois. Then at Mt. Vernon, Illinois, took I-57 to Marion, Illinois. 2 rest areas in Indiana one in Illinois. A 90 degree F. day and cloud cover burnt off-exceedingly humid.

6/20/98 Left motel in Marion, IL at 7:15 am. Took I-57 south to IL 146 west to Anna and Ware then south in IL 146 to Cape Girardeau (Missouri). Over bridge across Mississippi River. New bridge is being constructed immediately south of old bridge.

A new "town" has been established adjacent to 1-55.

As it was raining we explored KMart and Schucks's food store. Both are very neatly laid out stores.

To I-55 via Missouri 74 and 34 Intersection. Coll. 6/20/98-A 2 photos. * Intersection with US 61 (King's Hwy) just E of junction. Both sides of road -2 photos (each side).

6/20/98 Photo. Type section of Cape Later. See Willman and others, 1975. Handbook of Illinois stratigraphy. ISGS Bull. 95, p. 84. In Cape Girardeau, Missouri. On Main St., just N. of Broadway.

In Cape Girardeau, Missouri. Aquamai St. immediately north of bridge abutment-Mississippi River held back by a concrete wall. Photo.

6/20/98 Gale, Illinois. Old Gale Rd just southeast of bridge under RR. photo.

Old town of Thebes on Mississippi R. under RR abutment. RR bridge goes over Mississippi R. Couldn't examine exposure readily. Ord.? Siln.? Lunch on Mississippi R. at Thebes at roadside park.

6/21/98 Small rock quarry on US 61 about 2 miles north of Maquoketa, Iowa. 1 photo late afternoon on east wall of quarry. Dolostone. Silurian.

6/21/98 Drove from Marion, Illinois to Dubuque, Iowa. Took I-57 to near Mt. Vernon and then took I-64, then Illinois 4 (stop after Scott Air Force Base) to I-55 (near Worden).

Stopped N of Maquoketa to look at quarry on E. side of road. Photo(s). (no photos?).

6/22/98 Road on north and south sides of US 20 ? miles west of Dubuque, Iowa. Otc. is immediately (1/10 mile) east of Barrington Drive (lakes). Higher on hill, north Otc of Cheaty RR 2.5 miles west of intersection of US 20 with US 32. This is Witzke and Glennister, '87, US 20 roadcut. 1 photo. Coll. 6/22/98/-A Coll. 6/22/98-B

6/22/98 See p.35, Sloan, R.E. 1987. 1 photo - NE side of road 1/2 mile east of Elgin Hwy B64 (river on west side). 1 photo - 4 miles east of Elgin on Hwy B64. Also photo of Turkey River Valley.

6/22/98 road cut about 17 miles west of previous page stop on Hwy B64. photos.

6/22/98 road cut 1/2 mile SW of Eldorado, lowa on HS 150. photo (end of roll of film).

6/22/98 Festina. East side of road (lowa 150) the cut is just N of intersection with road to Ossian (B 32). Photo.

This is a different locality as described for 5-6-63

*same as bottom half of section at Eldorado. Sparry calcite and crinoid columnals in packstone.

6/23/98 1. Stopped at Dryersville tourist info.

2. Stopped at Gutenberg Gt. River Road section starting at section where Gt. R. Rd. intersects with Frenahna Road. 1.3 miles north of Gutenberg city line. 10 photos. See Sloan, R. edit. 1987 p. 26 fig. 4.1.

2 photos of Mississippi Rd from lookout on US 52 and 1 photo of Wall Member across road from lookout - these are same beds as at top of River Road cut a couple of miles to north. (see photo 10 above.)

6/23/98 Town of Gutenberg. 1 photo. 5/4/63 K, K', L. Intersection of US 52 and Iowa C/X. Platteville GP- Miflin Mbr and all part MacGregor Fm.

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See p. 26 Sloan. Fig. 4.1-Shaley late that is greenish.

Notes: Good road sections S. of Gutenberg of Ord. and Siln. C/X- road section at 5 miles west of Garber. 1/2 mile from X41 intersection and 2 miles east of Garber.

Stop 15 in 1995 field book. Near Littleport, Clayton County, Iowa. County Road X21. 3 photos- 1 at bottom (Frankville Mbr.), 1 at top (Littleport Mbr.) and 1 in the middle (Luana Mbr.).

Maquoketa FM. - shale atv. top

6/23/98 Twin Bridges Park. Stop 16 in 1995 field book. 3 photos. Section on west side of roadcut ca. 6 miles west of Colesburg, Iowa on Iowa 3.

6/24/98 Location 17 in 1995 field notes. 1/4 mile south of Graf on W side of road. 1 photo. Took Asbury Rd. from Dubuque which became D 17 and then turned south to Graf on side road. Section is becoming overgrown. Just west of Twin Springs River. (see Witzke and Glonister, '87, p. 105)

17-B 1/2 mile east of intersection of D17 and turn off road to Graf on D 17. 3 photos of NE roadcut on D17.

6/24/98 Photo of 5/16/95 #21 of Tschiggfrie quarry.east of US 52 about 1 to 1/2 miles south of junction with US 61; photo from southern entrance to quarry off of Olde Maxsey Road.

There are several roadcuts between the junction of US 20 and US 52 South, one of which shows a nice bedding break which probably a bentonite. Also along US 20 there are some impressive roadcuts of the Dubuque Fm.

SEE 18 Becker quarry. 1 photo.

6/24/98 Location 23A-new locality. Iowa 151 roadcut. Brainard Shale and overlying Silurian. See Witzke, B.J. and B.F. Glenister 1987. Ord. Maquoketa Fm in the Graf area, eastern Iowa. Geol. Soc. Near Dubuque airport.

Thursday 6/25/98 Church St. Luana Lea's quarry. Location 14 od 1995 field book. (5/14/95) 3 photos.

6/26/98 Otc 1/4 mile east of bridge over river on lowa 9. Shale at bottom of section. Check!! Need to look at.

6/26/98 NW of Decorah Fish Hatchery on dirt road. This is a west road off Iowa 9 1/2 mile east of county W-38 on road to fish hatchery, about 1.5 miles south of Decorah Holthaus quarry, Roverud construction. W-38 is Middle Calmar Rd. 1 photo.

Hovey quarry, Roverud Const. 1/2 mile S of junction of W-38 and Fish Hatchery Road, just west of W-38. 1 photo.

6/26/98 <u>76</u> Lincoln Highway Rd., quarry is 3 miles east of W-38 on Middle Calamar Rd. Nordnes quarry, Roverud Const. 3 photos. See 12 Rovang quarry - <u>76</u> & <u>12</u> are apparently the same.

6/26/98 <u>77</u> Out in country -rural area 265th ave. N of Fort Atkinson, IA. 1/2 mile north from junction with IA-24. 2 photos. (lunch in shade at creek level at section discussed over page.)

6/26/98 78 On B-32 hwy about 1 mile east of Fort Atkinson. Top of hill east of creek. Turkey River??? photo.

6/26/98 79 Just west of bridge over creek. photo.

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6/26/98 <u>80</u> 1.2 miles east of 266th Ave. and St John's Cemetery Road, about 0.5 miles west of creek. Co. Rd. B32. photo.

6/26/98 <u>81</u> Road cut S. side of B32 at 266th St. (St John's Cemetery Road) about 0.5 miles west of bridge over Turkey River and 0.5 miles east of junction with IA-24. photo.

82 a similar outcrop is shown on east side of IA-24 just S of junction with B32. 2 photos.

6/26/98 <u>83</u> Ft. Atkinson Ls. (type) - at old Ft. Atkinson. 2 photos, quarry on west side of fort.

6/26/98 <u>84</u> Spillville, IA Quarry about 3/4 to 1 mile east of Spillville on County 325 (Dvojak Hwy) (on north side) 4 photos.

6/27/98 On IA-9, 0.3 miles east of Frandville Rd. junction about 7 miles SE of Decorah locality 9 of L, G, B. (our 1995 loc. 13) 2 photos.

86 Near Postville, IA a large quarry about 0.4 miles east of the junction of US 51 and W4B (east) 4 photos.

6/27/98 <u>85</u> Decorah quarry outcrop on IA-9 southern side of Decorah, IA. Adjacent to road; quarry extends parallel to hwy, road into quarry parallels IA-9. 3 photos. (floor of quarry, photo 3, on Hwy IA-9)

6/27/98 Lunch at Ridgeway (Prarie Farmers Trail Park) Roadside park. Winnishelk Conservation Board, just south of Ridgeway, IA. Roverud Const. Co. Kendallville quarry. 2 photos. Loc 17 of L, G, B 1979. formerly called Pavlovec quarry.

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6/27/98 Quarry about 3/4 mile east on Old Cattle Creek Road from junction with County W14 about 3.5 miles SE of Kendallville, IA. Quarry is fairly badly overgrown (in late June). 1 photo. Loc. 33 of L, G & B, 1979. SW 1/4, SE 1/4, sec.1, T99N, R-10W Thicknesses in sketch acc to L, G & B. (met farmer in pickup truck twice who directed re the roads.)

Sunday 6/28/98

- 1. 2 photos Decorah city "portals" US 52 north. Falls at bridge.
- 2. Roverud quarry. <u>9-A</u> of 1995. Minnesota Spring Grove Quarry, south sid eof road. 2 photos. "underpass quarry"
- <u>9-C</u> Quarry northside of road, in shade, more weathered. 1 photo.

6/28/98 Patterson Quarry, Fountain, Minnesota. <u>5-A</u> locality of 1995 field book. 3 photos in quarry, one shade, 2 on sunny faces.

3-B (1995) locality west of Preston on MN 30, west of bridge over Middle Branch.

6/28/98 3-A locality- 1 photo of west side of Fillmore County Road 7; becoming overgrown. 2 photos of quarry. (Note: locality 3A is 3/8 to 1/2 miles along Fillmore Co. Rd. 7 from intersection with MN 30.)

Red locality 8 from 1995 field book East side of road cut on hillside. 4 photos.

87 new locality on MN 30 about 1/2 mile east of Chatfield. 1 photo. ?Lower part of Galena? End of roll. This is second cut at top of hill. Platteville is exposed lower to west then some of St. Peter ss.



6/28/98 <u>88</u> Quarry N. edge of Chatfield; east side of US 52. St. Peter Ss, overlain by Glenwood and then lower Plattsville. 1 photo.

Sogn. Rd.cut Locality 2 in 1995 field notes. 6 photos

89 2 photos of old quarry up hill east of intersection. Sogn. road cut on Goodhue 9.

Then US 63 to Co. 30 at Stewartville, go east on Co. 30 for 5 miles pick up county road (Olmstead) going south from Pleasant Grove (N-S road to Spring Valley). Fillmore Co. 4 east then Co. Fillmore 38.

6/28/98 Location <u>4</u> Masonic Park 7 pictures. S. road across bridge has good section on west side. A number of good sections. Co. 1(Spring Valley) and Fillmore 38.

Easiest way to this place is to go north from Spring Valley and Fillmore Co. 1 to the intersection with Fillmore Co. 38 (about 2 miles), and turn east on 38. It rounds, but in a couple more miles goes down into the river gorge to Masonic Park.

Striking bluffs standing up on landscape as we tried to locate Masonic Park.

6/28/98 Took US 52 north from Decorah then a west dirt road (Blufton Rd)

- 90 East side of Upper Iowa R. on Blufton shortcut (dirt road) and 1 mile east of Blufton- 1 photo. Bridge to Blufton closed due to high water. There are good exposures on road down to river.
- 91 Iowa, about 14 miles north of Decorah. Quarry on west side of US 52 at Burr Oak Rd. NW cnr US 52.

See Sloan edit (1987) p. 211 strat section of Dubuque Fm. We think we are looking at Littleport, Luana, Frankville beds and probably top of Stewartville Fm. (Top down listing of units.)

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6/29/98 Rifle Hill Quarry. Patterson Co.

Red locality <u>6</u> in 1995 field note book. We drove from Decorah on US 52, truned off at Harmony, MN taking Co. 139 and MN 44 (dirt road under repair). However, after several miles MN 44 was closed and we had to take MN 17 and twisted around on roads until an automotive repair works (out among the farms) made a diagram for us to get to Cherry Grove (via Preston). As we approached Chrry Grove, still a few miles out, we came down a long hill with good rock exposures and at bottom of hill across creek we arrived at Rifle Hill Quarry.

Nothing at top of quarry in small area that has a seperate entry.

4 photos, 3 in bottom main quarry and one in top of quarry.

Notes 1) lots of fine-scale soft silt deformation in calc. mudstones. 2) lots of chert with structures in chert and these suggest that silification preceded final compaction of mudstone.

6/29/98 6A Still at Rifle Hill quarry. photo of Elgin Fm on south side of road at top of quarry hill (headed W). 2.5 miles to intesection of Co. 14 and Co. 5 1 mile west on MN 14, an otc. of Elgin slabby late and calc. silts.

6/29/98 92 Wubbels Hill (Warren and Kim Wubbles) a property and farmer's name is Wubbels. This is closer to 4 miles ESE and off the main county road.

June 7 we left Nashville and joined I-40 east to pick up TN 53, then on to TN 85. Finally found Gladdice section which is in Jackson Co. and just E. of Gladdice.

Continued on TN 85 and then took TN 53 to 33. Lunch in shade at 33. Then on to Celina on TN 53.

Need to get by Interlibrary Loan:

Cressman, E.R., and Karklins, O.L. 1970. Lithology and Fauna of the Lexington Late (Ordovician) of Central Kentucky, in Guidebook for field trips-Geol. Soc. of Amer., Southeastern Sect., 18th Ann. Mtg., Lexington, KY, 1970. KY Geol Survey, p. 17-28

Cressman, E.R. and Noger, M.C. 1976. Tidal-flat carbonate environment in the High Bridge ?(M Ord.) of central Kentucky. KY Geol. Survey, Series 10, Rept. of investigations 18, 15p.